

In the claims:

Please cancel claims 76-86, 93-98, and 100.

Please amend the claims as follows.

Claims 1-56 (Cancelled).

57. (Currently Amended) A method for creating a gene profile for a given stage of Alzheimer's disease, the method comprising:

(a) providing, from a patient who has Alzheimer's disease, a plurality of cells, the cells of the plurality characterizing a stage of disease progression ~~from a non-neural tissue or bodily fluid of a patient who has Alzheimer's disease, the disease being at the given stage;~~

(b) isolating mRNA from cells in the plurality to produce a heterologous population of mRNAs; and

(c) determining the ~~level~~ levels of expression of ~~one or more of~~ the mRNAs of more than one gene in the population of mRNAs, wherein the ~~level(s)~~ levels of expression ~~constitute(s)~~ constitute a gene profile for the given stage of Alzheimer's disease.

58. (Original) The method of claim 57, wherein step (c) comprises producing antisense RNA transcripts from the population of mRNAs and amplifying the antisense RNA transcripts.

59. (Original) The method of claim 58, wherein the antisense RNA transcripts are quantitated, after amplification, by: (a) hybridization with cDNA; (b) sequence-based serial analysis; or (c) cDNA microarray analysis.

60. (Original) The method of claim 57, wherein the stage of Alzheimer's disease is determined by obtaining neuronal cells from the patient and viewing at least one of the neuronal cells through a microscope.

61. (Original) The method of claim 60, wherein the stage of Alzheimer's disease is determined by the degree to which the neuronal cells, when viewed through the microscope, appear filled with neurofibrillary tangles.

62. (Original) The method of claim 61, wherein the stage of Alzheimer's disease is a stage at which the neuronal cells lack frank neurofibrillary tangles.

63. (Original) The method of claim 57, wherein the stage of Alzheimer's disease is determined by obtaining neuronal cells from the patient and exposing at least one of the neuronal cells to two or more antibodies.

64. (Original) The method of claim 63, wherein the two or more antibodies comprise:

- a) an anti-cathepsin D antibody and mAb69;
- b) an anti-TG-3 antibody and mAb69; or
- c) an anti-MC-1 antibody and mAb69.

65. (Original) The method of claim 57, wherein the mRNA isolated in step (b) comprises mRNA that encodes a cell cycle regulator.

66. (Original) The method of claim 57, wherein the mRNA isolated in step (b) comprises mRNA that encodes a lysosomal hydrolase.

67. (Original) The method of claim 57, wherein the mRNA isolated in step (b) comprises mRNA that encodes a kinase.

68. (Original) The method of claim 57, wherein the mRNA isolated in step (b) comprises mRNA that encodes a phosphatase.

69. (Original) The method of claim 57, wherein the mRNA isolated in step (b) comprises mRNA that encodes an apoptosis factor.

70. (Original) The method of claim 57, wherein the mRNA isolated in step (b) comprises mRNA that encodes a mitochondrial protein.

71. (Original) The method of claim 57, wherein the mRNA isolated in step (b) comprises mRNA that encodes a cell stress-related protein.

72. (Currently Amended) The method of claim 57, wherein the ~~bodily fluid is~~ cells are cells within a sample of cerebrospinal fluid and the mRNA isolated in step (b) comprises mRNA that encodes a synaptic marker or a neurotrophic factor.

73. (Currently Amended) The method of claim 57, wherein the ~~bodily fluid is~~ cells are cells within a sample of blood.

74. (Currently Amended) The method of claim 57, wherein the ~~bodily fluid is~~ cells are cells within a sample of saliva or urine.

75. (Currently Amended) The method of claim 57, wherein the ~~non-neural tissue is mucosal tissue~~ cells are cells within a sample of cheek scrapings or skin.

Claims 76-86 (Cancelled).

87. (Currently Amended) A method for determining whether an individual has Alzheimer's disease and, optionally, the stage to which the disease has progressed, the method comprising:

(a) providing a plurality of cells from a ~~non-neural tissue or bodily fluid~~ of the individual;
(b) isolating mRNA from cells in the plurality to produce a heterologous population of mRNAs;

(c) determining the ~~level~~ levels of expression of ~~one or more of~~ the mRNAs of more than one gene within in the population of mRNAs, wherein the ~~level(s)~~ levels of expression ~~constitute(s)~~ constitute a gene profile at for the given stage of Alzheimer's disease; and

(d) generating a gene profile according to the method of claim 57; and

~~(d)~~ (e) comparing the gene profile of the individual with a the profile of the patient obtained in (d) by the method of claim 57, wherein substantial similarity between the individual's profile and the patient's profile indicates that the individual has Alzheimer's disease and, if the patient's profile is a unique representation of a given stage of Alzheimer's disease, that the individual's disease has progressed to about the same stage as that of the patient.

88. (Original) The method of claim 87, wherein the mRNA isolated from the individual comprises mRNA that encodes a cell cycle regulator, a lysosomal hydrolase, a kinase, a phosphatase, an apoptosis factor, a mitochondrial protein, or a cell stress-related protein.

89. (Currently Amended) The method of claim 87, wherein the ~~body fluid of the individual is~~ cells are cells within a sample of cerebrospinal fluid and the mRNA isolated from the individual comprises mRNA that encodes a synaptic marker or a neurotrophic factor.

90. (Currently Amended) The method of claim 87, wherein the ~~body fluid of the individual is~~ cells are cells within a sample of blood.

91. (Currently Amended) The method of claim 87, wherein the ~~body fluid of the individual is~~ cells are cells within a sample of saliva or urine.

92. (Currently Amended) The method of claim 87, wherein the ~~non-neural tissue of the individual is mucosal tissue~~ cells are cells within a sample of cheek scrapings or skin.

Claims 93-98 (Cancelled).

99. (Original) A method for determining whether a compound affects the gene profile for a given stage of Alzheimer's disease, the method comprising:

- (a) creating a gene profile according to the method of claim 57 for
 - (i) a first patient who has Alzheimer's disease, the disease being at the given stage, the first patient having been treated with the compound and

(ii) a second patient who has Alzheimer's disease, the disease being at the given stage, the second patient being one who has not been treated with the compound; and

(b) comparing the gene profile created for the first patient with the gene profile created for the second patient, a difference in the profiles of the first and second patients indicating that the compound affects the profile of genes expressed at the given stage of Alzheimer's Disease.

Claim 100. (Cancelled).